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AUTHOR(S):

Takatera, Sadao

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INTRODUCTION AND DIFFUSION OF DEPRECIATION ACCOUNTING IN JAPAN, 1875-1903*

By Sadao TAKATERA**

I Process Promoted by the Meiji Government

The beginning of depreciation accounting was found in the era of the Industrial Revolution in England, where it was first used experimentally in some progressive partnerships such as the firm of Boulton and Watt, then in the third quarter of the nineteenth century, as the accounting for corporation finance came to play a dominant role in the formation of modern accounting conventions and principles, it became widely used in connection with the measurement mechanism of profit available for dividends. In 1878, for income tax purposes, depreciation of "machinery or plant" including ship was officially permitted in the *Customs and Inland Revenue Act*.

The British born depreciation accounting with such a historical background was introduced and gradually diffused in the corporate sector of our economy between 1875 and about 1903. However, as the common feature with the British experience and the peculiar feature of Japan were interwoven, the process of the introduction and diffusion of depreciation accounting in Japan showed some characteristic phenomena pointed as follows.

(1) Since it was impossible to introduce modern accounting in all the sectors of our economy at once, in accordance with a priority for industrialization, it was first introduced in commercial banks, then after refining by pioneering experiments and necessary remouldings, it was diffused successively to other economic sectors. As a result, the process of the introduction and diffusion of depreciation accounting had a time lag with each economic sector. Roughly speaking, in my view, it seems to be divided into the following stages with about ten years intervals respectively: in financial institutions 1875-1885, in shipping companies 1877-1888, in manufacturing companies 1890-1903. Summing up, we can say that the process of the introduction and diffusion of depreciation accounting was developed from the auxiliary sector of economy to the main sector for industrialization.

(2) It should, however, be noted that this process was developed not as a spontaneous process coming from the entrepreneurial freedom in accounting behavior but as the process promoted by the Meiji government which had a power to regulate

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** Professor of Economics, Kyoto University.

the managerial freedom in accounting behavior. The administrative means taken by the Meiji government differed from stage to stage. Firstly, in the stage of the introduction and diffusion of depreciation accounting in the financial institutions, the government promoted the process with an administrative orientation (recommendation and instruction without binding force). Secondly, a means to be called a governmental ordering or conditioning (annexing of a fixed obligation) was taken in this stage for the shipping companies receiving subsidies. Finally, in the manufacturing companies, from 1899, the government promoted the process with the tax-administrative guidance through a formal adaptation of the principle of "tax accounting in accordance with business accounting."

(3) In the earlier stage of the industrialization characterized by the lower level of operating revenues, it was rather difficult for most of the companies to charge off the proper depreciation, because once generous dividends were paid to satisfy the stockholders who had contributed necessary capital funds for enterprises, there was no longer room, or not much if any, for depreciation as a revenue-factor to be used for reinvestment or repayment of borrowings. In other words, there were few companies with sufficient conditions for the proper provision of depreciation at the time. It would, however, be possible even for such companies to fulfill the conditions for proper depreciation if their financial deficiency were compensated by the government. Therefore, only such companies as were being supplied with the financial deficiency by the government could appropriate proper amount for depreciation from the beginning.

On the other hand many companies, which could not expect any profit compensation from the government, as the development stage of enterprises proceeded autonomously could only appropriate depreciation in proportion to the profit before depreciation. Thereafter, when the government used its tax-administrative guidance this proportional depreciation became closer to the proper depreciation. However, due to the cyclic nature of many businesses these fundamental changes in the functional relationship between profit and depreciation did not take place, once companies had successfully completed the development stage of their enterprises. In these circumstances how did the process of introducing and diffusing depreciation accounting proceed while resolving problems faced in each stage?

In the following paragraphs we shall show how this process was applied by illustrating some cases representing each stage and the problems that had to be solved.

II Pioneering Attempts at Depreciation Accounting of Buildings Directed by Governmental Orientation

As the first step to create the institutional environment for industrialization, the Meiji government introduced the corporation system as the most advanced business form for capital centralization, but at the same time the government had to seek the selective introduction of a financial disclosure plan to communicate to stockholders financial

accounting information as a form of financial advertising or financial public relations which was expected to be indispensable to corporation. In 1872, using the National Banking System of the United States as a model, the government promulgated the *National Bank Act* with the purpose of creating a nationwide network of incorporated commercial banks as a vanguard of the industrialization, by which the government put the national banks under an obligation, not only "to transmit to the Comptroller of the Currency the [prescribed] detailed reports" (Art. 12) but also "to communicate to all stockholders" the financial accounting information as a corporation, and "to notify them publicly in the daily newspapers" (Art. 13). In the following year, the government issued the *Periodical Reporting Rules and Forms for National Banks*, in which the government, for the first time in Japan, gave the instruction as to the forms and the procedures for the assets and liabilities statement, and the profit appropriation statement (including the profit and loss account).

In the introduction of the financial reporting plan, the fact that the Meiji government selected that of the American National Banking System as a model would be worth noting. For, among the commercial banks in the advanced countries functioning at the time "as local, national and international bookkeeper in the current exchange of all kinds of goods and products," it was the American National Banking System that had the most uniform reporting plan. Nevertheless, when the Japanese tried to prepare the financial accounting information by following the newly established rules for financial statements, they had to rely on the double (debit and credit) entry bookkeeping method, of which they had naturally no experience. So, the Bureau of Currency had a British banking adviser, Alexander Allan Shand (1844-1930) write a draft of text on the bank bookkeeping system, which the Bureau translated and compiled, publishing in 1873 as the first official text book on accounting under the title of *Detailed Method of Bank Bookkeeping*. The next effort of the government to diffuse the bank bookkeeping was the opening of the School of Banking in the Section of Bank Administration in 1874 by accepting a suggestion of Shand.

Despite such efforts, "the method of bookkeeping in each [national] bank was not yet uniform." But gradually the errors in the earlier stage of the introduction were corrected through the bank auditing conducted by Shand for national banks in 1875, and also the defects found in the *Bank Bookkeeping* as well as in the *Reporting Rules* such as neglecting the depreciation of buildings were revised. Thus by the end of 1875, the task of the government to transplant the most advanced British bank accounting practice was nearly completed.

In fact, in some national banks including the First National Bank of Tokyo and the Fourth National Bank of Niigata which accepted the advice or the instruction shown in the audit report by Shand, not only the depreciation of buildings as a disposition of profit but also the "adjustment account" integrated interest receivable account and interest payable account was put into practice from the first half of 1875, though in the Fourth National Bank, the beginning of the latter practice was postponed until the second half of the same year.

As we have seen in the foregoing, the accounting practice of the national banks had passed through the wave of the cash basis and stepped into the accrual basis in less than three years from the introduction. It is true that the promoting and guiding ability of the government would have contributed a great deal to this dynamic start-dash, but when we compare our cases with that of the Imperial Bank of Canada, which was organized in 1875 but took seven years before the beginning to depreciate buildings in 1882, the fact that even if it were by trial and error, the First National Bank and the Fourth National Bank in Japan took only a little more than two years in preparation for the same practice should not be overlooked.

The fruits of the experiment on modern accounting conducted in the earlier national banks was diffused, through a number of guide books on bank accounting as well as the revised *Reporting Rules and Forms for National Banks* of 1876, not only to all the national banks organized over the country after revision of the *National Bank Act* in 1876 and counted as many as one hundred and several tens, but also to the various financial institutions organized after 1877, namely, Tokyo Stock Exchange, Osaka Stock Exchange, Tokyo Marine Insurance, Meiji Life Insurance, Yokohama Specie Bank, Bank of Japan and a few private banks. As a result, in these financial institutions, following national banks, "depreciation of properties" in proportion to the profit before depreciation came to be practised. In these cases, most of the financial institutions treated depreciation as a disposition of profit, though a few of them, such as Tokyo Marine Insurance and Mitsubishi Exchange did treat it as an expense.

III Depreciation Accounting of Ships Obligated by the Governmental Order

As has been pointed out, in the earlier stage of the industrialization, it was almost impossible for many companies to leave room for depreciation, because had they paid dividends sufficient to satisfy the stockholders, there remained no surplus, or quite small if any, available for depreciation from the profit before depreciation. For this reason, even if the "depreciation of bank properties" was instructed in the *Reporting Rules* of 1876, many among more than one and a half hundred national banks were inclined to give priority to dividends which was in relation of trade-off with depreciation and in fact, not a few national banks were "desirous to have stockholders receive sufficient income by increasing the dividends rate," and did not "make any effort to amortize even their organization costs quickly," and many national banks deliberately deferred the depreciation of buildings or cut it down to a low level if they did. Contrary to these general tendencies, in some financial institutions with higher revenue, only a few in numbers, relatively larger amounts were appropriated for the depreciation of buildings as well as for the amortization of organization costs.

We have already seen that since 1875 in the financial institutions the depreciation of buildings in proportion to the profit before depreciation was effected by a disposition of profit. In contrast with this, the case of shipping companies, who were granted

the government subsidy, would be remarkable in that they had been charging off the proper, and occasionally excessive, depreciation of their ships. Take the Mitsubishi Mail Steamship Company for example. This firm was a one-man company led by Yataro Iwasaki (1835-1885). In 1875 the company was required by the "First Order" of the government to "reform the existing accounting [method]" (Art. 12) and to "transmit the monthly reports" (Art. 7) to the Bureau of Postal Services as a condition to be granted the subsidy. Thereupon, the company provided in 1877 the *Bookkeeping Methods for the Mitsubishi Mail Steamship Company* edited by Heigoro Soda (1847-1922) who was then in the position of the chife accountant of the company. In these *Methods* it was provided to "estimate depreciation of each ship at ten per cent of its present book-value per year or five per cent per half a year and charge this off as a loss for the period" (Art. 5). Thus the company successively charged off the depreciation of ships in every half-yearly settlement of accounts from the first half of 1877 on. However, the depreciation rate was very high and far exceeded five per cent of the present book-value provided in the *Methods*. The exception was the depreciation of ships in the first half of 1879 when the rate went down as low as three per cent, though this might be an adjustment for the highest recorded thirteen per cent depreciation of ships in the second half of the previous year. Eventually, when the company merged with its rival, the Kyodo Unyu (United Shipping) Company and transfered ships to the newly organized Nihon Yusen (Japan Mail Steamship) Company, the Mitsubishi Company restored a part of the previous depreciation to write-up the ship value by one point several times for the purpose of coordinating with the ship value of the Kyodo Unyu Company, because the latter ignored the previously accrued wear and tear of ships and had them taken over by the new company at the acquisition cost.

Consequently, the book value of the ships taken over by the Nihon Yusen Company was higher than the actual value, but with the "Order" of the government issued in 1885, the company was put under an obligation to "charge off five per cent of acquisition cost of each ship per year" (Art. 28) on the condition that the government would "subsidize the [deficiency of] profit of the company for fifteen years from the date of starting business, if the profit does not reach eight per cent of the capital stock" (Art. 7), though the capital stock was being watered through the write-ups or no write-offs of ships in the merged companies. So, from the first settlement of accounts in 1886 on, the company regularly wrote off at five per cent of acquisition cost, though until the eighth settlement of accounts in 1893 the depreciation was treated as a disposition of profit even if it was regarded as an actual expense.

Another example of the enforcement of depreciation by the government was found in the case of the Osaka Shosen (Merchant Marine) Company organized in 1884. Having been issued with the "Order" by the government in 1887, the company had to assume an obligation as "on the assumption that the maintaining value of ships being one million and eight hundred thousand yen.....to appropriate not less than four per cent [of this value] for depreciation of original cost.....per year" (Art. 7) on the condition that the government would "supply the company with fifty thousand yen

per year for eight years from Meiji 21 [1888] as the subsidy for ship improvements” (Art. 4). Later on, though the maintaining value of ships was decreased to one million and five hundred thousand yen, the company continued a higher rate of depreciation than four per cent of the maintaining value of ships.

In contrast with the shipping companies, we can find no evidence of depreciation accounting in the railway companies which sprang up in 1880’s like mushrooms after rain. It would, however, been possible for the main railway companies to begin depreciation accounting immediately after the starting business because the government had promised them to supply the interest during construction and/or the deficiency of profit. For example, the *Charter* issued to the Nihon Tetsudo (Japan Railway) Company by the government in 1881 promised that “once the corporation stocks being subscribed, from the next day of the paid-in to the completion of construction of each division eight per cent of interest per year will be supplied. After the commencement of transportation in each division if the net profit does not reach eight per cent per year, the deficiency will be supplied by the government for ten years per each division between Tokyo and Sendai and for fifteen years per each division between Sendai and Aomori” (Art. 5).

The reason why the depreciation accounting in the railway companies was aborted would be found in the accounting regulation by the government. With the purpose of regulating railway accounting, modeling on the British “double account system” which was provided as a special form of railway accounting in the *Regulation of Railways Act* of 1868, the Japanese government established in 1885 the (National) *Railway Accounting Act* drawn up by the chief accountant of the Railway Administration Office of Kobe, Tamiyoshi Zushi (1854–1922). In parallel with this act the *Private Railway Act* was also established in 1887, by which the railway companies were enforced to adopt so-called replacement accounting instead of depreciation accounting. According to that method, the railway companies were forced to charge “the maintenance costs..... of such revenue-yielding properties as permanent ways, rolling stocks, machineries, stations and lands” to “revenue account” (Art. 33). As a result, even after 1901, “as far as the depreciation reserve for machineries in factories of railway companies is concerned, except for Nihon Tetsudo Company, no other railway companies adopted this accounting policy. Therefore, generally all the [railway] companies did not estimate the useful life of machineries and write off in accordance with the predetermined depreciation rate.”

IV Diffusion of Depreciation Accounting of Machineries through Tax-administrative Guidance

From 1880’s to 1890’s the organization of manufacturing companies successively increased in the main sector of the industrialization. But despite the fact that in these companies a larger sum of construction cost of productive facilities was needed—far larger than that of buildings for financial institutions, even if not larger than of railway

companies——, the government did not grant any subsidies. For these reasons, it was rather hard for the manufacturing companies to have a certain prospect of recovering the original costs. Therefore, most of the companies had to adopt an accounting method to set aside reserves for depreciation of machineries from the profit before depreciation in proportion to this profit. Consequently, as late as the second half of 1890's, among the manufacturing companies in the Kansai district (the western part of Japan) and especially among the cotton-spinning companies that had been "competing with each other with the amount of dividends.....those that were setting aside depreciation reserve for machineries were just a few.....and only such manufacturing companies as were favored with the higher profit.....succeeded in the formation of the reasonable depreciation reserve for machineries."

Nevertheless, from the second half of 1898, the accounting method to set aside depreciation reserve for machineries came to be increasingly used among manufacturing companies, for in 1898 Nihon Kangyo (Japan Hypothec) Bank, a special bank of the government began to require that all borrowing companies set aside more than one and half per cent of the original cost of machineries per half a year as a condition for the relief loan.

These examples may tell us the fact that though the old *Commercial Code* of 1890, which was based on the *Draft of Commercial Code for Japan* (1884) written by a German juridical adviser, Carl Friedrich Hermann Roesler (1834–1894), and took over the judicial precedents or doctrine that had interpreted the adjective-less value found in Art. 31 of the *General German Commercial Code* of 1861 as the objective market value, was requiring to "put the current price or the market value [at the balancing date] on all properties" (Art. 32), the accounting practice in those times was never, except for a part of the financial institutions, influenced by the asset-valuation provision in the *Commercial Code* of 1890.

These situations were drastically changed in 1899 when corporate income tax came to be imposed. So, in the followings, we will see the process of the change in relation to the corporate tax accounting.

Since the original *Income Tax Act* of 1887 provided for taxes only on personal income, it did not have a direct influence upon corporate business accounting, though the fact that the *Act* promoted to reorganize business form from the personal to the corporate should not be overlooked. In the *Income Tax Act* of 1899, corporate income became taxable, but the *Act* provided only that corporate taxable "income be computed as the amount remaining after deducted total losses from total profits for the fiscal year" (Art. 4). However, as the new *Commercial Code* of 1899, like the old *Code*, required "to put current price at the date" (Art. 26) of balancing, the Bureau of Tax Administration in charge of the execution of the *Income Tax Act* decided to include the difference resulting from downward revaluation in "losses" but "to regard the depreciation reserve for machineries and tools set aside from profit as [taxable] income." Eventually, as the manufacturing companies found it disadvantageous in tax accounting to rely on

such a depreciation reserve method, many of them came to seek the way to the tax saving either by switching to a method by which their fixed assets were directly written off through downward revaluation at current price or by newly adopting this direct write-off method.

In this case, however, downward revaluation of fixed assets at current price in its literal sense was—this had already become an accounting problem in German railway companies in 1870's—quite difficult matter. Prior to the introduction in about 1902 of the subjective useful value theory advocated by Herman Veit Simon in the German controversy on the balance-sheet value, in order to solve this problem theoretically, following a peculiar interpretation advanced by a prominent accountant, Einosuke Katsumura, the Japanese business executives had to regard “current price of machinery or ship” as “the remaining amount deducted [from the original cost] for the diminishing value due to wear and tear in proportion to the elapse of the useful life of [these] properties.” And it was not until 1903 when the Bureau of Tax Administration “decided to estimate the [average] useful life of ships at twenty-five years and to count two per cent of the ship cost as depreciation of ships per every fiscal period (a period is six months)” that the constant amount depreciation based on estimated useful life was regarded as the difference of downward revaluation at current price for income tax purposes, though it was as a result of winning a series of administrative lawsuits by such shipping companies as Nihon Yusen, the Toyo Kisen (Oriental Steamship) and the Osaka Shosen against the Tax Inspector General of either Tokyo or Osaka District.

In the manufacturing industries, the cotton-spinning companies felt the income determination of the Tax Inspector General unsatisfactory, but instead of a lawsuit, appealed to the Finance Minister. In the decision of 1903 to the appeal, the Finance Minister “conceded that cotton-spinning machineries had only twenty or thirty years of useful life, and its decrease in value is actually unavoidable. Therefore, the depreciation amount to make it good should be counted as a loss” for income tax purposes. Consequently, “depreciation of machineries in manufacturing industries” also came to be “deducted in computation of corporate [taxable] income.”

Thus, it became general tendency that “in corporation, [taxable] income is computed by deducting from total profits the depreciation of the fixed capital such as ships, buildings and machineries.” and taking this opportunity, the diffusion of depreciation accounting proceeded further. In this process, what played a significant role was the principle of “tax accounting in accordance with business accounting” which was adopted by the Bureau of Tax Administration following the principle of “standard of business accounting for tax accounting” or “dependence of tax accounting upon business accounting” established in the German income tax system in the fourth quarter of the nineteenth century. In fact, as a formal adaptation of this principle, when depreciation reserve was set aside from profit “just like the distribution of profit,” this reserve was taxable as an income. Accordingly, as has been mentioned, with the

intention of tax-saving, there appeared many companies switching from the depreciation reserve method to the direct write-off method. Nay, far from that, since they could not deduct a higher amount of depreciation as a loss in tax accounting than the amount deducted as an expense in business accounting, an inclination to write off beforehand in business accounting the full amount of depreciation allowable for income tax purposes came out.